

# **Making Ballot Language Understandable to Voters**

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## **Background: NIST is mandated under HAVA to provide technical assistance to the TGDC and is developing the VVSG\***

- Usability and accessibility are key areas
- TGDC resolutions #08-05 Usability Guidance for Instructions, Ballot Design, and Error Messages and #06-05 Accommodating a Wide Range of Human Abilities motivate our research on ballot language
- Some of the guidelines in this research can be applied to voting equipment and tested as part of test lab certification

\*HAVA (Help America Vote Act), TGDC (Technical Guidelines Development Committee),<sub>2</sub> VVSG (Voluntary Voting Systems Guidelines)

## An example:

For one DRE, the card the voter uses has three different names:

The plastic card that the voter is given to insert into the machine says:

**VOTER CARD.**

The place to insert it into the machine has the instruction:  
Insert **voter activate card** here.

The message on the screen at the beginning of the process says:

To Begin Voting Insert Voter Card Into Slot Below.

The message at the end of voting calls the card: **Vote Card.**

## **Clear and simple ballot instructions are critical to voting success, but**

- Voting instructions are developed mainly by election officials and vendors
- Rarely are they subject to field testing and experimentation
- Yet there is a large body of research and best practice guidelines in other domains:
  - cognitive psychology, human-computer interaction, information design, interface design, linguistics, plain language, reading, and technical and legal writing.
  - Resources include: [www.plainlanguage.gov](http://www.plainlanguage.gov),  
[www.usabilityprofessionals.org/usability\\_resources](http://www.usabilityprofessionals.org/usability_resources).

# **Universal Usability: Instructions and messages should be designed for the diverse population of voters.**

- Everyone benefits from clear instructions
  - Voters with wide variations in cognitive skills
  - Tired voters and aging voters
  - Voters with limited English proficiency or limited reading skills
- Poll workers also benefit from clear instructional material

**We did a review and observed that most, if not all, ballots, both on paper and on screen, violate at least some of the best practices.**

- We focused on the language of instructions and other messages that voters encounter and compared those instructions and messages to best practice.
- This included instructions to voters, messages during voting, and system messages
- We reviewed materials from 4 DRES, >100 paper ballots from 50 states and DC <http://vote.nist.gov/ballots.htm> \*

\*Thanks to Richard Niemi for sharing his collection.

# Improving U.S. Voting Systems

- NIST activities supporting the Help America Vote Act

NIST

National Institute of  
Standards and Technology

Put instructions before they are needed – not after.

**X** The instructions come  
after the voting options.

Many voters will not notice  
the instructions until after  
they have voted.

FOR DISTRICT COURT JUDGE  
DISTRICT 8, DEPT. 3

Shall Judge **Kenneth R. Neill** of the Eighth  
Judicial District, Department 3, of the State  
of Montana be retained in office for another  
term?

☐ YES

☐ NO

(Blacken the oval ☐ before the word "YES"  
if you wish the official to remain in office.  
Blacken the oval ☐ before the word "NO" if  
you do not wish the official to remain in office.)

**✓** The instructions come  
before the voting options.

This is the logical order  
for voters.

In voting for judges:

If you want the judge to stay in office  
for another term, blacken the oval ☐  
before the word YES.

If you do not want the judge to stay in office  
for another term, blacken the oval ☐  
before the word NO.

**For District Court Judge  
District 8, Dept. 3**

Do you want Judge Kenneth R. Neill of the  
Eighth Judicial District, Department 3, of the  
State of Montana to stay in office for another  
term?

☐ YES

☐ NO



Put warnings about consequences before – not after – the voter is likely to act.

## x Poor Practice

Ballot not complete!

You have not made a choice in some contests.

Press "Confirm" or the Vote button to finish casting your ballot.

Note: Once you press "Confirm" you can not return to the ballot to make changes.

Press "Return to ballot" to make changes or selections.

X Voters may act on this instruction without reading further down the screen.

X If they act on the instruction above this, they may miss out on changes they would have made if the note and final instruction had come earlier on the screen.



## ✓ Good Practice

Ballot not complete!

You have not made a choice in some contests.

Note: Once you press "Confirm," you cannot return to the ballot to make changes.

To make changes or selections, press "Return to ballot."

To finish casting your ballot, press "Confirm" or the Vote button.

✓ In this version, we make the consequence clear before the instruction.

✓ In this version, the instruction that cannot be undone comes last. As the final instruction, it should come at the end.

Write in the positive.

**X** Double negative

If that oval is not marked, your vote cannot be counted for the write-in candidate.

**✓** Positive

You must fill in the oval for your write-in vote to count.

On DREs, wait to highlight the option to cast the vote until voters have been through all the races and measures.

## **x Poor Practice**

DRE: As one DRE gets to the last page of the ballot, the VOTE button at the top lights up. It is very bright and attracts attention. That button is a form of instruction. It is an imperative verb, calling to the voter to push it.

It is at the top of the device so the voter sees it before reading anything else on the page – even though the rest of the page includes races or measures not yet voted.

## **√ Good Practice**

DRE: Set the VOTE button to light up only after the voter has been through all the pages of the ballot – and after the voter has been given the opportunity to return to any undervoted part of the ballot.

Use simple English words that voters know.

## **x Poor practice**

remain

retain

reverse side

such candidate as you desire

## **✓ Good practice**

stay

keep

back of

the candidate that you want

On DREs, do not use technical, computer jargon.

**X** Computer jargon

Your electronic ballot is activated.

**✓** Plain language

You may now start to vote.

**X** Computer jargon

navigate forward through the ballot

**✓** Plain language

move to the next ballot page

## Cover all important situations.

### **x Poor practice**

One DRE has an area for writing that is much longer than the number of characters (letters, numbers, and spaces) it allows –without telling voters that there is a maximum number.

When voters try to type more than that number, no message appears even though the write-in area still has space.

Voters may think they have done something wrong or that the machine is broken.

### **✓ Better practice for this situation**

For the write-in screen on this DRE:

- Design the write-in area to be the length of the maximum number of characters allowed.
- Tell voters about the maximum.
- If the voter tries to type more than the maximum number of characters, have the system send an informative (and nonblaming) message to the voter.

**x Poor practice** → **✓ Good practice**

ElectNID.txt file could not be found.

### **What the message means**

The manual says that likely causes of this problem are

- the compact flash card is missing
- the compact flash card is not properly seated in the terminal



## More useful for a poll worker:

Cannot find a necessary file from the compact flash card.

picture of  
flash card

If you do not have the card:

- get it
- put it in the correct slot in the voting machine

picture of  
machine,  
showing slot  
and how to  
put card in

If you have the card:

- take it out of the slot
- reinsert it firmly in the correct slot

If you cannot find the card,  
or if reinserting it does not solve the problem,  
call [company name's] customer service.

[give number if possible]

**We developed 20 guidelines for clear ballot instructions for both paper and 7 guidelines for writing clear system messages on electronic voting machines.**

- These can be found in the report “Guidelines for Writing Clear Instructions for Voters and Poll Workers” by Ginny Redish under “Documents and Meetings” at <http://vote.nist.gov>
- Each guideline or “best practice” has a rationale and an example.

## Placement

1. Put instructions where they are needed – not all together at the top.
2. Put instructions before they are needed – not after.

## Order

3. Put instructions in logical order. First task, first; last task, last.
4. Put warnings about consequences before – not after – the voter is likely to act.
5. On DREs, wait to highlight the option to vote until voters have been through all the races and measures.
6. On DREs, match the order of buttons to the order of the instructions

## Sentences

7. Start each instruction on a new line.
8. Write directly to the voter.
9. Keep each instruction as short as possible.
10. Watch the tone. Help voters; don't threaten them.
11. Write in the positive.
12. Put the context before the action.
13. Be consistent in the way you give instructions.

## Words

14. Do not use gender-based pronouns.
15. Use simple English words that voters know.
16. Be consistent in the words you use.
17. On DREs, do not use technical, computer jargon.
18. On DREs, be explicit in naming buttons.

## Topics

19. Cover all important situations.
20. Consider voters' likely mistakes.

## **Guidelines for clear system messages**

1. Do not call them error messages.
2. Do not blame the user.
3. Explain the problem.
4. If it will be useful, explain the probable cause.
5. Tell people what to do.
6. Use common words.
7. Use illustrations where they will help.

**These guidelines have not specifically been studied in the context of voters working with ballots. Research is needed to assess their importance and relevance to the specific situation of voting.**

- Guidelines need to be tested in the context of voters working with ballots and equipment.
  - Do voters read instructions on ballots?
  - How do organization and wording affect reading behavior?
- Research is needed to find out which words voters know and which they do not.
  - Cast a ballot
  - Contest/race
  - Partisan
  - Straight ticket
  - Split ticket